Long-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance System, 1974

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LONG-RANGE COST ESTIMATES FOR OLD-AGE, SURVIVORS AND DISABILITY INSURANCE SYSTEM, 1974

A. Introduction

This report is the eleventh in a series of Actuarial Studies dealing with the actuarial costs of the Old-Age and Survivors Insurance program, and the fifth to give detailed actuarial cost estimates for the Disability Insurance program established by the 1956 Amendments. The estimates given here relate to the OASDI cash-benefits program as it was after the 1973 Amendments, valued as of January 1, 1974. No estimates are presented here for the Hospital Insurance and the Supplementary Medical Insurance programs.

The first cost estimates for the Old-Age and Survivors Insurance program were developed at the time the legislation introducing survivor benefits was enacted (1939) and were subsequently presented in Actuarial Study No. 14. In the second of this series (developed in 1942 and presented in Actuarial Study No. 17), estimates were made on the basis of a certain amount of actual operating data, as well as more complete demographic data from the 1940 census and the 1935 Family Composition Study.

The third in this series of cost estimates was developed in 1943-44, and was published as Actuarial Study No. 19. This differed from the previous study in that, not only were there available more experience data, but also a differential average wage between the low-cost and high-cost illustrations was introduced.

Actuarial Study No. 23 was the fourth in this series of estimates. It was published in 1947 and used more current data on population, wage levels, etc. Two further studies were prepared for and printed by the House Committee on Ways and Means, dated July 27, 1950 and July 21, 1952, relating to the 1950 Amendments and 1952 Amendments, respectively.

The cost estimates presented in Actuarial Study No. 36 (published in 1953), the fifth in the series, related to the 1952 Amendments and correspond to those in the House Committee on Ways and Means print of July 21, 1952, but differ considerably because of the use of the new population projections (Actuarial Study No.33) and revised cost factors.

Following the Conference Committee agreement on the 1954 Amendments, cost estimates were developed in the short time available before the President signed the bill and were

published as a committee print of the House Committee on Ways and Means, dated August 20, 1954. Subsequently, these cost estimates were carried out on a more complete basis, rather than using certain approximations and short cuts that were necessary in the rapid development of the original cost estimates. The figures in this more complete estimate differed only slightly from the original estimates and were presented in Actuarial Study No. 39, the sixth in the series.

The development of the actuarial cost estimates relating to the 1956 Amendments followed a similar pattern. Cost estimates were prepared on an approximate preliminary basis immediately after agreement was reached by the Conference Committee and were published as a committee print of the House Committee on Ways and Means, dated July 23, 1956. The more refined cost estimates presented in Actuarial Study No. 48, the seventh in the series, differed from the preliminary ones to a greater extent than was the case in 1954 because of the use of revised population projections (Actuarial Study No. 46), the use of the somewhat higher earnings assumptions (reflecting approximately 1956 earnings levels, whereas the figures in the committee print assumed earnings at about the level prevailing in 1955), and a considerable number of other changes in basic assumptions and methodology.

The actuarial cost estimates for the 1958, 1960, and 1961 Amendments were contained in various committee prints of the House Committee on Ways and Means. In addition, the annual reports of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds present actuarial cost estimates for the program; these incorporate changes as a result of using different assumptions based on the developing experience. Also, it should be pointed out that Actuarial Study No. 49 (issued in May 1959) gave an extensive description of the methodology involved in the long-range cost estimates then current.

New OASDI cost estimates were prepared in 1963 for the use of the 1963 Advisory Council on Social Security Financing. These were published in Actuarial Study No. 58 and were based on the population projections of Actuarial Study No. 46. Some minor changes were made in the methodology. Basically, the estimates reflected a revision of the earnings-level assumption and the retirement-rates assumption, as well as all the other factors involved in the cost analysis. Specifically, actual experience data was used for the first time for disability benefits at ages below 50 and for male retirement benefits claimed before age 65.

Detailed cost estimates were prepared at the time that the 1965 Amendments were being considered. The estimates for the final bill were prepared for the House Ways and Means Committee and were published as a committee print, dated July 30, 1965. These estimates were based on the calculations that had previously been published in Actuarial Study No. 58.

New cost estimates for the 1965 Act were prepared in 1967 (as of January 1, 1967) and published as Actuarial Study No. 63. These estimates were based on new population projections that were presented in Actuarial Study No. 62, and they incorporated the experience that had developed under the 1965 Act since its enactment. On the basis of these estimates, the Congress approved the 1967 Amendments, which included substantial changes in the benefit structure of the OASDI program. The estimates for the final bill were based on the values in Actuarial Study No. 63. They were published as a committee print of the House Ways and Means Committee, dated December 11, 1967.

The 1969 OASDI Trustees' Report presented a set of new estimates for the 1967 Amendments, valued as of January 1, 1969. These new estimates were the first that made direct use of the disabled-worker beneficiary termination rates that had been developed from the actual OASDI program experience. These termination rates were published in Actuarial Study No. 65.

In connection with the 1969 Amendments, new estimates were prepared at the time that the legislation was adopted. These were published in the House Report 91-700 dated December 5, 1969.

The 1970 Report of the OASDI Board of Trustees presented new cost estimates which were based on an updating of all assumptions except for the population assumptions and the disability termination rates.

New estimates were prepared at the time that the 1971 Amendments were enacted. These estimates were published in a Ways and Means Committee print dated March 24, 1971.

All long-range cost estimates prepared through 1971 were based on static assumptions regarding both wages and benefits. The 1971 Advisory Council on Social Security recommended that estimates be prepared on dynamic assumptions. In this respect, the 1972 Report of the OASDI Board of Trustees presented new estimates based on both static and dynamic assumptions.

New estimates were prepared on dynamic assumptions at the time of the 1972 Amendments. These were published as a Ways and Means Committee print dated March 2, 1973.

The 1973 report of the OASDI Board of Trustees presented new estimates for the 1972 Amendments. These were further revised in connection with the amendments enacted in 1973 and are published in House Report No. 93-627 dated November 9, 1973.

The latest estimates were presented in the 1974 Report of the OASDI Board of Trustees. These new estimates are based on the revised population projections published in Actuarial Study No. 72. These long-range cost estimates are presented in more detail in this actuarial study.

B. Basic Assumptions

The assumptions adopted for the cost estimates have been selected so as to be consistent with the actual operating data and with other assumptions. In addition, they represent our best projection of possible future long-range developments. The various basic assumptions are:

(1) Mortality

The cost estimate is based on decreasing rates of mortality to the year 2000 and level rates thereafter. Assumptions as to mortality declines are based on analysis of mortality data by age, sex, and major groups of causes of death.

(2) Birth Rates

The cost estimate assumes age-specific birth rates that increase gradually from the 1973 values to a level which is equivalent to a total fertility rate of 2.1 children per woman in the year 2009. By "total fertility rate" is meant the expected number of babies that a woman will have during her child-bearing period if she survives to the end of the period and if she were subject to the age-specific fertility rates specified.

(3) Migration

It was assumed that there would be about 300,000 net immigrants per year for all years in the future.

(4) Population

The above assumptions as to fertility, mortality, and migration--when applied to the existing population--yield the basic population projections. At the time that the population study was in process, age-sex specific estimates of the U.S. population as of July 1, 1973, adjusted for census underenumeration, were available. These were used as the starting point for the projections, after a further adjustment for the difference in area coverage between the census estimate and the OASDHI program.

Table 1 summarizes the population projection. For the year 2050, those aged 65 and over represent 16.0% of the total population. In comparison with 1950 when the corresponding figure was 8.0%, this represents a relative increase in the

proportion of the aged of about 100%. In the 100-year period preceding 1950, the relative increase was about 225%. For details regarding the population projection used in the cost estimate, see Actuarial Study No. 72, Illustrative Population Projections for OASDHI Long-Range Cost Estimates.

(5) Employment

In developing bases for estimating both payrolls and insured populations, estimates of the proportion of the total population in covered employment in a given year were prepared by age and sex. Valuable guides toward developing estimates of these proportions exist in the form of (a) the actual coverage data for recent years and (b) labor-force experience data and projections published by the Department of Labor. It has been assumed that over the long-range, the average unemployment rate will fluctuate about 5%.

Table 2 shows the assumed ratios of persons with earnings credits in the year to total population, for quinquennial age groups for four illustrative years (no changes are assumed after the year 2000). For male workers under age 20, the ratios are assumed to increase. Small decreases are projected for male workers aged 20-59. For females under age 60, the ratios are projected to increase. Decreases are projected for both sexes at ages 60 and over.

(6) Taxable Earnings

Average taxable earnings per worker are projected through 1980 to increase at a rate determined by the projected short-range increases in average total earnings including the effect of changes in the earnings base. After 1980, average taxable earnings are assumed to increase by 5% per year. No age or sex differential in earnings is used, because the effect on the overall taxable earnings of variations in the composition of workers with taxable earnings do not warrant the additional computations.

(7) Taxable Payroll

By applying the previous assumptions as to covered employment and average earnings to the population projections, there are obtained the total numbers of persons with credited earnings in various years and the aggregate amounts of taxable earnings. The resulting data for selected years are shown in Table 3, along with the developed averages for persons with any taxable earnings in the year.

(8) Insured Population

From the most recent actual data on insured workers and the assumptions as to the proportions of the population in covered employment, there were developed, by cohort projection and general reasoning, the assumed proportions of the total population who are insured. As generally used, the term "insured" includes both "fully insured" and "currently insured only", but the latter category is relatively unimportant cost-wise and has been disregarded in this Study.

For selected years, Table 4 shows, by age and sex, the percentages of the total population who are insured. All rates are constant by 2005 for males and by 2015 for females.

By applying the assumed proportions insured to the projected population, there are obtained the estimated insured populations shown in Table 5 (note that the term "insured population" includes only persons who are "insured" as a result of their own earnings credits, and not wives and widows of "insured" workers who do not have insured status based on their own earnings record). It should be observed that the insured population aged 65 and over is projected to increase faster than the total insured population and that the increments are higher for females than for males.

(9) Marital Status

Assumptions as to marital status are necessary in estimating the costs of the various dependents and survivor benefits. The various assumptions, both for men and women, are based on census data and on actual claims data. The assumed proportion married in the future is adjusted upward at the older ages to allow for the effect of assumed improved mortality (resulting in fewer early deaths of spouses). Assumptions as to relative ages of husband and wife are based on census data and on actual claims data.

(10) Child's and Mother's Benefits

Projected numbers of child survivor beneficiaries are obtained from projections of the population under age 22 by estimating the proportion of such children in each future quinquennial year who will be orphans of insured workers. For those aged 19-21, an adjustment is made to take into account the requirement that they be full-time students. The method used for estimating benefit payments to child survivors and their mothers involves the assumption that the distribution of births by age of father reflected in recent statistics and the recent remarriage rates of mothers will

continue to prevail in the future. Mother beneficiaries are obtained by multiplying the number of child beneficiaries under age 18 or disabled by two factors, one of which is the ratio of mother beneficiaries to survivor-children at current experience and the other is an adjustment to reflect the projected trend in fertility.

(11) Parent's Benefits

As more and more of the aged become eligible for old-age, wife's or widow's benefits, the number eligible for parent's benefits will be relatively lower. Because of the relative unimportance of this category, its size has been roughly estimated by using graphical methods.

(12) Proportion of Eligible Persons who are Beneficiaries

For the various beneficiary categories, a considerable reduction in disbursements occurs because individuals who are otherwise eligible for monthly benefits are engaged in substantial employment and do not receive benefits (or do not receive full benefits because of the earnings test). In some instances, benefits are withheld from beneficiaries who are "entitled", while in other cases the potential beneficiary never files (notably in the case of mother's benefits in families where there are sufficient children to obtain a maximum or near-maximum benefit anyhow).

The effect of employment in reducing benefit costs is most important in connection with old-age benefits and wife's benefits. Table 6 shows the percentages of aged insured workers who received and estimates of those who will receive old-age benefits in selected years. The increase in these percentages in the past is due to the fact that there was a growing proportion of persons who were past the age at which the earnings test ceases to apply (age 72). In addition, there had been a tendency for earlier retirement. Table 7 shows such percentages by age groups (including ages 62-64).

It is assumed that, in the future, all eligible aged widows who are not insured on their own account will receive benefits and that no children and no wives will lose dependent's benefits because of their own work (wives who have larger benefits based on their own earnings record than their wife's benefits based on their husband's record are not shown as receiving wife's benefits, and it is this category that is most likely to be working beyond the minimum retirement age). Implicitly, it is assumed that the proportion of eligible mothers who receive benefits remains at the present level.

(13) Alternative Receipt of Benefits

A very important cost element several decades hence, although not so important currently, is the provision that women may not receive both full old-age benefits in their own right and full wife's, widow's or parent's benefits (also applicable to men with respect to their corresponding benefits). In effect, in such cases the larger of the two benefits is payable. For the cost estimates, it was assumed that these women will file for the wife's or widow's benefits at the same time that they file for the old-age benefit. In all cases, it is assumed that they receive the excess of such benefits over their old-age benefits as a supplement.

The number of women qualified for both old-age benefits and wife's benefits has been estimated by assuming that, in the ultimate year, 20% of all the females who are eligible for both old-age benefits and wife's benefits will be entitled to wife's benefits which are larger than their old-age benefits. Similarly, in the ultimate year, 37.5% of all females eligible for both old-age and widow's benefits will be entitled to widow's benefits which are larger than the old-age benefits.

(14) Benefit Payments

Level-benefit payments for each category of benefits were calculated as the product of the estimated number of beneficiaries for each of the next 75 years and their average benefit as of July 1, 1973. An adjustment was made for the retroactive payment of benefits, since in accordance with the law, benefits can be claimed retroactively up to 12 months . Also, in many cases a new beneficiary receives a first check for two or more months of benefits due to a delayed award or to the normal time that it takes to process a claim.

To estimate the benefit payments under the dynamic assumptions in a given year, the sum of all level-benefit payments in that year was multiplied by a dynamic factor designed to reflect benefit increases resulting from assumed future CPI increases, and changes in the AMW based on estimated increases in taxable earnings as well as on increases in the number of computation years required under present law. The methodology for computing these dynamic factors is described below.

For OASI, those persons who were awarded old-age benefits in 1973 were segmented into five earnings groups, each containing the same number of persons. To each group an average taxable earnings was assigned in such manner that the total average for the five groups reproduced the estimated average taxable earnings for all workers covered in 1973. Each of the

five averages was then projected backwards to 1956 following the trends of the median. From each of the resulting five schedules an AMW for 1973 and its corresponding PIA were determined. For 1974 and later years, this procedure was repeated with modifications to add and/or delete years of earnings in accordance with present law requirement for the number of years of earnings to be used in AMW calculations. For each year the average PIA was computed and the trend of these PIA's was used to project the actual awarded benefits in 1973 to future years. In this manner the average awarded old-age benefit was computed for each year in the projection period. The average old-age benefit in current-payment status was then computed by weighting the awarded benefits in each of the prior twenty years -- after inflating them to the current year's level according to assumed CPI adjustment in benefits -- by the percentage distribution by year of entitlement of old-age beneficiaries in current-payment status at the middle of that year. (The assumed distribution, which was based on actual experience, was assumed to remain constant. The dynamic factor for each year was calculated as the ratio of the average benefit in current-payment status as of that year to the average benefit for July 1, 1973.

The assumption just stated implies that each type of benefit is projected to increase from its 1973 level (shown on Table 8) in accordance with projected increases in average old-age benefits.

For Disability Insurance an analogous procedure was followed, but the average computation period was modified to reflect its varying nature by age and year. Table 9 shows the average old-age (and disabled-worker) benefits on which the increases were based.

(15) Disability Benefits

The numbers of disabled-worker beneficiaries were estimated by applying disability incidence rates to the populations insured for disability and by projecting these disabled workers using termination rates due to death and recovery from the disability. For males, it is estimated that about 91% (with minor variations by age) of the "fully insured" workers are also insured for disability. For females, the ratio is lower due to their lower labor-force participation and varies from about 50-80% in the early years to about 55-85% ultimately.

The disability incidence rates used are a revision of the rates in Actuarial Note No. 58. These revised rates reflect the experience through calendar year 1973. The future numbers of disabled-worker beneficiaries were estimated

on the basis of a revision of the termination rates in Actuarial Study No. 65. These revised rates are based on the termination experience of calendar years 1957-67.

The numbers of dependent-child beneficiaries and of wife beneficiaries with respect to disability beneficiaries were estimated as ratios of the disabled male workers. These ratios were based on recent actual experience of the program, and were adjusted to reflect the projected trend in fertility.

(16) Administrative Expenses

The estimated annual administrative expenses for future years (including the cost of vocational rehabilitation services for disabled beneficiaries) were obtained from the following relationships:

OASI--1.8% of total benefits

DI--5.0% of total benefits

(17) Contributions

The previous discussion as to earnings and payroll dealt solely with taxable earnings. However, the effective taxable payroll on which contributions are based is slightly lower for several reasons. Self-employment income is subject to a lower tax. In addition, although taxes are collected up to the annual earnings base from each employer and employee, there are cases in which an employee has more than one employer during the course of a year, and taxes on wages in excess of the earnings base are withheld from his pay. In such cases, the employee contributions for wages in excess of the base are refundable, but the matching amounts collected from his employers are not. According to an analysis of past experience of multiple-employer employment, it was assumed that about 1.3% of the taxable wages will be taxable at half the combined employer-employee rate. It was assumed, after an analysis of recent trends, that 5.6% of the taxable earnings will be due to self-employment after 1980, with somewhat higher percentages in earlier years.

(18) Interest Rate

The interest rate for the special issues to the OASDI Trust Funds is based on the average yield of all marketable obligations of the United States Government not due or callable for at least 4 years.

As a result of the lower interest rates prevailing in the past, the average yield of the total investments currently held by the trust funds is about 6.5%. An interest rate of 6.0% has been assumed for the cost estimates.

C. Results of the Cost Estimates

Table 10 shows, with respect to the aged, the actual and estimated numbers of monthly benefits in current-payment status. During the next 50 years, such beneficiaries are shown to increase from 20.6 million as of January 1, 1973 to 50.8 million in 2025. At that time, male old-age beneficiaries (retired workers) are estimated to make up 39% of the total, female old-age benefits about 8%, widow beneficiaries not eligible for old-age benefits about 10%, and parent beneficiaries less than .1%. The proportion of old-age beneficiaries who are women increases from 43% in 1973 to about 52% in the year 2025.

Table 11 relates the estimated total number of monthly beneficiaries aged 65 and over to the total population aged 65 and over, by sex. Whereas at the beginning of 1973, about 85% of all aged men and 86% of all aged women were actually drawing benefits, this proportion is projected to be eventually about 93%. The difference between these figures and 100% is accounted for by (a) persons not eligible for benefits and (b) persons eligible for benefits, but not receiving them because of the earnings test.

Table 12 shows, for various future years with respect to persons under the retirement age, the estimated number of OASI monthly benefits in current-payment status, as well as the actual data for 1960-73. Table 13 gives corresponding figures for the DI program. All categories of benefits show increases in future years. Table 12 also gives the estimated numbers of lump-sum death payments, which increase steadily as the insured population grows and becomes older on the average.

Table 14 shows the estimated amount of overlapping for female beneficiaries as between old-age benefits and wife's or widow's benefits. In the early years there are fewer cases of such overlapping, since relatively few of the current older married women worked sufficiently in covered employment to become insured for old-age benefits. However, in later years many aged married women will be insured for old-age benefits on their own account. Likewise, eventually many widows will qualify for old-age benefits by reason of their own employment.

About 34% of the female old-age beneficiaries are estimated to ultimately be also qualified for wife's benefits. However, since the unreduced wife's benefit is only 50% of the husband's old-age benefit, in only about 20% of such cases is the wife's benefit estimated to be larger than her old-age benefit. Likewise about 47% of the female old-age beneficiaries are estimated to ultimately qualify for widow's

benefits. Since the unreduced widow's benefit is 100% of the husband's old-age benefit, if initially claimed at age 65 or later, a relatively large proportion of such women (about 38%) have a widow's benefit that is larger than their old-age benefit. It should be emphasized again that these figures are particularly subject to fluctuations and uncertainty.

Table 15 summarizes the projected benefit payments as a percentage of taxable payroll for the OASI portion of the program, along with the actual data for the years 1960-73. The benefit payments increase from 8.48% of taxable payroll in 1973 to 14.43% in the year 2025. Old-age benefits constitute 76% of the total OASI benefits in the year 2025; those related to the aged make up 93% of the total. In the actual 1973 data, old-age benefits were 65%, other benefits for the aged were 22%, while younger survivor benefits and lump-sum death payments were 13%.

Table 16 is an analogous summary for the DI portion of the program. The benefit payments increase from 1.06% of taxable payroll in 1973 to 1.80% in the year 2025. Payments to disabled workers represented 82% of the total benefits in 1973, with wife's benefits being 5% and child's benefits being 13%. In the future, the proportion of the outgo for disabled workers is estimated to rise, as the proportion for dependents declines (due to the assumed lower fertility).

Table 17 shows the estimated average-cost over the 75-year period (1974-2048) by type of benefit for the OASI and DI portions of the programs. The long-range average-costs of the total benefits are 11.65% and 1.83% of taxable payroll, respectively. The additional costs for administrative expenses, the railroad financial interchange, and for raising the existing trust fund to the level of next year's expenditures increase the net total average-cost to 11.97% for OASI and to 1.92% for DI.

Table 18 shows for the most recent 9 years of actual experience and also for the projected period the current-cost as percent of taxable payroll of all expenditures in the year, including for all future years the amounts needed to maintain the funds at about one year's expenditures. It should be observed that the OASI cost increases gradually until about 1995, then decreases slightly and after the turn of the century begins to increase rapidly until it levels at about 15 1/2 percent of taxable payroll after the year 2030. The DI cost increases continuously until about the year 2015, when it begins to level at about 2 1/4 percent of payroll. These trends are due to the fertility and economic assumptions which are discussed under "Basic Assumptions."

Table 19 facilitates comparisons of various "current-cost" projections in assessing the sensitivity of the projections to economic assumptions. The first column in the table shows the official estimates of the "current-cost" of the OASDI program. These estimates result in an average-cost of 13.89 percent of taxable payroll. It should be observed that the overall projected average-cost is measured in this table in terms of the arithmetic average of the "current-cost" for each of the 75 years in the valuation period.

The second and third columns in Table 19 present the projected "current-cost" on the assumptions that increases in earnings would remain at the same ultimate 5 percent level as in the central set, but that CPI would be one percent lower or higher than in the central set. These results could also be interpreted as being based on a one-percent variation on the projected gain in real earnings wherein the whole variation is reflected in a change in CPI. These projections indicate that a one-percent variation in CPI would change the average-cost by about 28-48 percent, relatively.

The fourth and fifth columns present the projected "current-cost" on the assumptions that the ultimate CPI increase would remain at the 3 percent level used in the central set, but that the ultimate increases in earnings would be one percent lower or higher than in the central set. These results could also be interpreted as being based on a one-percent variation on the projected gain in real earnings wherein the whole variation is reflected in a change in earnings. These projections indicate that a one-percent variation in earnings would change the average-cost by about 22-31 percent, relatively.

A significant fact to be noted is that the second and fourth columns are based on the same projected gain in real earnings of 3 percent but that the projected average-costs are different. A similar observation could be made on the basis of the third and fifth columns. The results indicate that, even if two projections are based on the same gain in real earnings, the projected cost of the OASDI System would be affected by the level of the CPI increases. We could also interpret the results to mean that, all other factors being equal, the cost of the OASDI System will depend on the level of inflation, with the cost being lower if inflation is kept at low levels.

The same effect can be observed by comparing the first, sixth, and seventh columns. In this case, the real earnings gains are assumed at 2 percent. As will be noted that the average-cost of the OASDI System increases by 9 to 12 percent, relatively, for each one-percent increase in both CPI and earnings.

In general, the sensitivity analysis shown in this table indicates that the effect of variations in the economic assumptions is relatively small in the early years, but that it becomes progressively more significant in the later years. The results of this analysis demonstrate the effect of changes in specific economic factors on future OASDI costs. However, they should not be interpreted as a prediction of the range of variation in that cost over the next 75 years.

Table 20 compares the projected current-cost of the OASDI program, as a percenrage of payroll, under various fertility assumptions. The second column shows the official projections which are based on an ultimate fertility rate of 2.1 births per woman. Columns one and three show projections based on ultimate fertility rates of 1.9 and 2.3, respectively. The current-cost under all three assumptions remains about the same through 1995. From 2000 on, the current-costs diverge significantly, primarily as a result of the differences in the number of covered workers that materialize under the three assumptions. The aged populations at that time are similar in size under each assumption since they consist of persons born in years prior to the beginning of the projection period. Consequently, the differences in the beneficiary population are not as significant as those in the worker population. The resulting average-costs indicate that, under the 1.9 assumption, the cost of the OASDI program is about 5% higher relatively than under the 2.1 assumption, whereas, under the 2.3 assumption, it is about 4% lower.

D. Comparison with Previous Estimates

Prior to the cost estimates prepared for the 1965 Act, the actuarial procedures assumed that the financing of the system would be into perpetuity. Projections were prepared for the necessary factors for many years--up to a far-distant point in the future, when all factors were assumed to level off. The 1963-65 Advisory Council on Social Security Financing recommended that the financing period be changed to 75 years (roughly, the life span of current new entrants). This recommendation was adopted and, starting with the 1965 Act, the cost estimates for OASDI have covered only a period of 75 years into the future.

Table 21 presents a historic summary of the results of the long-range cost estimates that have been prepared in previous years. In comparing cost estimates, account should be taken of several factors, such as different interest rates, different periods covered, different assumptions as to when "maturity" would occur, and the different time elements involved.

In accordance with the recommendations of the 1971 Advisory Council on Social Security, the actuarial methodology was modified to incorporate assumptions of increasing earnings and benefits and is described in detail under "Basic Assumptions". For purposes of comparing the results of the two different methodologies, the 1971 Act was valued on the level-earnings as well as the dynamic assumptions. Since then the long-range cost estimates have been prepared on the basis of dynamic assumptions only.

TABLE 1

ACTUAL AND PROJECTED U. S. POPULATION, 1950-2050
(in millions)

Calendar Year	Aged 20-64			Aged 65 and Over			All Ages		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
				Actual Data[a/]					
1950	44.2	44.9	89.1	5.9	6.5	12.4	76.8	77.4	154.2
1960	48.9	49.8	98.7	7.6	9.5	17.1	93.9	95.1	188.9
1970	55.6	56.9	112.5	8.6	12.1	20.7	105.4	108.4	213.8
				Projections					
1980	65.4	66.5	131.9	10.0	14.9	24.9	114.1	118.6	232.7
1990	72.9	73.8	146.7	11.6	17.7	29.3	124.5	129.9	254.4
2000	78.8	79.8	158.6	12.1	18.9	31.0	132.5	138.6	271.1
2010	85.7	86.9	172.6	13.1	20.5	33.6	140.0	146.8	286.8
2020	86.4	87.7	174.1	17.1	25.6	42.7	146.1	154.1	300.2
2030	86.2	87.3	173.5	20.4	30.9	51.3	149.7	159.4	309.1
2040	89.1	90.2	179.3	19.6	30.8	50.4	152.4	162.8	315.2
2050	90.0	91.1	181.1	20.1	31.1	51.2	154.7	164.9	319.6

a/ Figures for 1950 are from Census (as of April 1). These data relate to the total United States and not merely to the continental United States. Figures for 1960 and after are as of July 1, and incorporate a correction for underenumeration.

NOTE: Figures are individually rounded and, in some instances, do not add exactly to totals shown.

TABLE 2

PROJECTED RATIOS OF PERSONS WITH EARNINGS CREDITS IN YEAR TO TOTAL POPULATION IN AGE GROUP

Age Group	Male				Female			
	1975	1980	1990	2000	1975	1980	1990	2000
15-19	65.2%	66.3%	66.8%	66.8%	50.3%	51.7%	52.8%	52.8%
20-24	94.4	94.4	94.4	94.4	76.4	79.0	82.4	83.9
25-29	93.9	93.8	93.8	93.8	62.1	64.7	66.9	67.8
30-34	92.6	92.6	92.6	92.6	53.8	56.5	59.3	59.8
35-39	88.4	88.2	88.1	88.1	53.9	56.0	59.0	60.0
40-44	85.3	85.1	85.0	85.0	53.0	54.8	57.3	58.1
45-49	83.3	82.9	82.5	82.3	52.1	54.6	56.2	56.4
50-54	81.6	81.0	80.4	80.4	52.1	53.7	55.4	55.7
55-59	78.9	78.2	78.0	78.0	46.4	47.9	50.0	50.6
60-64	68.2	65.7	64.2	64.2	33.7	30.5	27.6	26.9
65-69	39.5	36.6	34.9	34.9	19.6	18.1	18.1	18.1
70+	16.1	14.5	12.3	11.8	4.6	4.0	4.0	4.0

TABLE 3

ESTIMATED PERSONS WITH TAXABLE EARNINGS, TOTAL TAXABLE EARNINGS, AND AVERAGE TAXABLE EARNINGS[a/]

Calendar Year	Persons with Taxable Earnings in Year (in millions) Male	Female	Total	Total Taxable Earnings in Year (in billions)	Average Taxable Earnings
			Actual Data		
1960	47.9	24.6	72.5	$ 207	$ 2,854
1961	48.0	24.8	72.8	210	2,879
1962	48.7	25.6	74.3	219	2,949
1963	49.3	26.3	75.5	225	2,986
1964	50.3	27.2	77.5	236	3,053
1965	52.0	28.6	80.6	251	3,108
1966	53.7	30.9	84.6	313	3,694
1967	54.8	32.2	87.0	330	3,792
1968	55.9	33.5	89.4	376	4,205
1969	56.9	35.2	92.1	401	4,359
1970	57.2	35.5	92.7	414	4,469
1971	57.3	35.6	92.9	424	4,562
1972	59.3	36.4	95.7	483	5,046
			Projections		
1975	60.6	40.2	100.8	685	6,796
1980	66.3	45.3	111.6	1,031	9,242
1985	69.3	48.0	117.3	1,384	11,795
1990	71.5	49.8	121.3	1,826	15,054
1995	73.9	51.8	125.8	2,417	19,213
2000	77.2	54.4	131.6	3,227	24,522
2025	84.2	58.5	142.8	11,858	83,040

a/ The total taxable earnings and the average taxable earnings are both affected by the maximum taxable earnings base. This base was increased from $4,800 to $6,600 in 1966, to $7,800 in 1968, to $9,000 in 1972, to $10,800 in 1973, to $13,200 in 1974, and subject to automatic provisions thereafter.

TABLE 4

PROJECTED INSURED POPULATION AS PERCENT OF TOTAL POPULATION

Age Group	Male				Female				
	1975	1980	1990	2005 & After	1975	1980	1990	2010	2015 & After
20-24	90%	90%	90%	90%	72%	74%	77%	77%	77%
25-29	98	98	98	98	82	84	86	86	86
30-34	97	97	97	97	74	77	79	80	80
35-39	95	96	96	96	68	70	72	73	73
40-44	93	95	95	95	66	68	70	71	71
45-49	94	95	95	95	66	68	72	73	73
50-54	93	95	95	95	65	66	70	73	73
55-59	95	95	95	95	63	65	68	71	71
60-64	95	96	96	96	60	64	67	70	70
65-69	94	96	97	97	57	60	66	70	71
70-74	91	95	97	97	53	57	64	69	71
75-79	91	91	96	97	48	53	60	68	71
80-84	91	91	95	97	42	48	57	67	71
85+	85	90	91	97	32	40	52	66	71

TABLE 5

ESTIMATED INSURED POPULATION
(in millions)

Calendar Year	All Ages[a/]			Aged 65 and Over		
	Male	Female	Total	Male	Female	Total
	Actual Data (as of January 1)					
1960	49.2	27.5	76.7	5.9	2.6	8.5
1961	52.1	32.3	84.4	6.2	2.9	9.0
1962	53.6	35.0	88.5	6.4	3.1	9.5
1963	54.2	35.6	89.8	6.6	3.4	10.0
1964	54.9	36.4	91.3	6.8	3.7	10.4
1965	55.7	37.1	92.8	6.9	3.9	10.8
1966	56.7	38.2	94.9	7.1	4.3	11.4
1967	57.9	39.3	97.2	7.2	4.5	11.8
1968	59.3	40.7	100.0	7.4	4.8	12.2
1969	60.5	42.0	102.5	7.5	5.0	12.5
1970	61.7	43.6	105.3	7.7	5.3	13.0
1971	63.0	45.2	108.2	7.8	5.6	13.4
1972	64.2	46.8	111.0	8.0	5.8	13.8
	Projections (as of July 1)					
1980	71.6	56.0	127.6	9.4	8.1	17.5
1985	76.9	61.8	138.7	10.3	9.5	19.8
1990	80.6	66.0	146.6	11.1	10.9	22.0
1995	83.5	69.1	152.6	11.6	11.9	23.5
2000	86.7	72.2	158.9	11.7	12.4	24.1
2025	100.4	85.7	186.1	18.6	20.4	39.0

a/ The actual data are for all ages combined, but the projected data are for ages 20 and over.

TABLE 6

ESTIMATED OLD-AGE BENEFICIARIES AGED 65 AND OVER IN CURRENT-PAYMENT STATUS AS PERCENT OF INSURED POPULATION AGED 65 AND OVER

Calendar Year	Male	Female	Total
Actual Data (as of January 1)			
1960	84%	87%	84%
1961	85	87	85
1962	86	88	86
1963	89	89	89
1964	89	89	89
1965	89	89	89
1966	89	88	89
1967	89	90	89
1968	89	90	89
1969	89	90	89
1970	90	90	90
1971	90	90	90
1972	91	90	91
1973	93	92	92
Projections (as of July 1)			
1980	96	95	95
1985	96	96	96
1990	96	96	96
1995	96	96	96
2000	97	96	97
2025	96	96	96

TABLE 7

ESTIMATED OLD-AGE BENEFICIARIES IN CURRENT-PAYMENT STATUS
AS PERCENT OF INSURED POPULATION, BY AGE AND SEX

Calendar Year	Aged 62-64		Aged 65-69		Aged 70-74		Aged 75 and Over	
	Male	Female	Male	Female	Male	Female	Male	Female
			Actual Data (as of January 1)					
1960	--	42%	69%	79%	90%	94%	98%	97%
1961	--	38	70	77	91	94	98	97
1962	13%	39	73	78	92	95	99	97
1963	22	42	76	78	95	97	99	98
1964	24	43	76	78	95	97	100	100
1965	25	44	75	77	96	96	100	100
1966	24	42	75	77	96	95	99	96
1967	24	42	75	78	98	97	98	98
1968	24	41	75	79	97	94	99	100
1969	24	41	75	79	96	93	99	100
1970	24	40	76	79	95	91	100	100
1971	26	41	77	80	95	91	100	100
1972	28	43	79	80	94	90	100	100
1973	30	45	81	82	97	92	100	100
			Projections (as of July 1)					
1975	35	49	87	85	99	97	100	100
1980	37	52	89	88	100	97	100	100
1985	38	52	89	89	100	98	100	100
1990	38	53	90	89	100	98	100	100
1995	38	53	90	89	100	98	100	100
2000	38	53	90	89	100	98	100	100
2025	38	53	90	89	100	98	100	100

TABLE 8

ESTIMATED AVERAGE ANNUAL BENEFITS
IN CURRENT-PAYMENT STATUS IN 1973, BY BENEFICIARY CATEGORY

Beneficiary Category	Average Annual Benefit
OASI	
Male Old-Age	$2,169
Female Old-Age	1,731
Wife	1,012
Widow	1,870
Child	1,226
Mother	1,389
Parent	1,677
DI	
Male Worker	2,329
Female Worker	1,817
Wife	659
Child	599

TABLE 9

ESTIMATED AVERAGE ANNUAL OLD-AGE AND DISABILITY INSURANCE BENEFITS IN CURRENT-PAYMENT STATUS

Calendar Year	Average Old-Age Insurance Benefit	Average Disability Insurance Benefit
	Actual Data (as of January 1)	
1960	$ 873	$ 1,068
1961	888	1,072
1962	908	1,075
1963	914	1,080
1964	922	1,087
1965	930	1,093
1966	1,007	1,173
1967	1,012	1,177
1968	1,024	1,181
1969	1,186	1,342
1970	1,205	1,353
1971	1,417	1,575
1972	1,586	1,758
1973	1,944	2,151
	Projections (as of July 1)	
1980	2,922	3,533
1985	3,770	4,727
1990	4,918	6,241
1995	6,329	8,131
2000	8,130	10,655
2025	30,709	39,604

TABLE 10

ESTIMATED NUMBER OF AGED[a] MONTHLY BENEFICIARIES
IN CURRENT-PAYMENT STATUS
(in thousands)

Calendar Year	Old-Age		Survivors			Total
	Male	Female	Wife's[b]	Widow's[c]	Parent's	
			Actual Data (as of January 1)			
1960	4,937	2,589	2,057	1,394	35	11,012
1961	5,217	2,845	2,158	1,544	36	11,800
1962	5,765	3,160	2,252	1,697	37	12,911
1963	6,244	3,494	2,365	1,857	37	13,997
1964	6,497	3,766	2,409	2,011	37	14,720
1965	6,657	4,011	2,434	2,159	36	15,297
1966	6,825	4,276	2,444	2,371	35	15,951
1967	7,034	4,624	2,469	2,602	35	16,764
1968	7,161	4,859	2,478	2,770	34	17,301
1969	7,310	5,111	2,479	2,938	32	17,869
1970	7,459	5,363	2,481	3,092	30	18,425
1971	7,688	5,660	2,500	3,227	29	19,104
1972	7,952	5,975	2,525	3,366	27	19,845
1973	8,231	6,325	2,556	3,510	26	20,648
			Projections (as of July 1)			
1980	9,977	8,760	3,192	3,910	21	25,860
1985	10,889	10,268	3,292	3,923	20	28,393
1990	11,749	11,619	3,407	3,916	19	30,710
1995	12,209	12,554	3,407	3,880	18	32,068
2000	12,357	13,163	3,306	3,909	17	32,735
2025	19,674	31,640	4,254	5,256	17	50,841

a/ In 1960-61, this means men aged 65 and over and women aged 62 and over; in 1962 and after, persons aged 62 and over, except that for 1966 and after widows aged 60-61 are included and for 1969 and after disabled widows aged 50-59 are included.

b/ Including husband beneficiaries, but excluding wife beneficiaries who are caring for an entitled child.

c/ Including widower's benefits.

TABLE 11

ESTIMATED NUMBER OF BENEFICIARIES AGED 65 AND OVER IN CURRENT-PAYMENT STATUS AS PERCENT OF TOTAL POPULATION AGED 65 AND OVER

Calendar Year	Male	Female	Total
Actual Data (as of January 1)			
1960	65%	55%	59%
1961	68	59	63
1962	71	62	66
1963	74	65	69
1964	76	68	71
1965	77	70	73
1966	78	72	75
1967	81	80	80
1968	82	82	82
1969	82	83	83
1970	83	84	83
1971	83	84	84
1972	84	85	85
1973	86	86	86
Projections (as of July 1)			
1980	90	90	90
1985	91	91	91
1990	93	92	92
1995	93	93	93
2000	94	94	94
2025	93	93	93

TABLE 12

ESTIMATED NUMBER OF MONTHLY SUPPLEMENTARY AND SURVIVOR BENEFICIARIES UNDER RETIREMENT AGE IN CURRENT-PAYMENT STATUS AND LUMP-SUM DEATH PAYMENTS IN YEAR
(in thousands)

Calendar Year	Supplementary Benefits[a]		Survivor Benefits		Lump-Sum Payments[c]
	Wife's[b]	Child's	Mother's	Child's	
	Actual Data (as of January 1)				
1960	103	246	376	1,508	779
1961	111	268	401	1,577	813
1962	140	338	428	1,650	865
1963	167	405	452	1,755	969
1964	170	418	462	1,811	1,011
1965	170	424	471	1,873	990
1966	169	461	472	2,074	1,047
1967	171	507	488	2,232	1,134
1968	167	510	496	2,362	1,218
1969	166	518	504	2,490	1,266
1970	163	518	510	3,606	1,258
1971	168	546	522	2,688	1,284
1972	173	558	534	2,778	1,321
1973	177	580	539	2,847	1,358
	Projections (as of July 1)				
1980	178	705	736	2,877	1,569
1985	192	550	946	3,083	1,709
1990	204	421	1,093	3,206	1,842
1995	204	406	1,162	3,475	1,979
2000	202	410	1,198	3,724	2,103
2025	345	701	1,175	3,683	2,949

a/ Payable to dependents of old-age beneficiaries (retired workers).
b/ Wives under 65 with entitled children in their care.
c/ Number of decedents on whose account payments are made in the year.

TABLE 13

ESTIMATED NUMBER OF MONTHLY DISABILITY BENEFICIARIES[a/]
IN CURRENT-PAYMENT STATUS
(in thousands)

Calendar Year	Disabled Worker	Supplementary Benefits[b/]	
		Wife's	Child's
Actual Data (as of January 1)			
1960	334	48	78
1961	455	77	155
1962	618	118	291
1963	741	147	387
1964	827	168	457
1965	894	179	490
1966	988	193	558
1967	1,097	220	654
1968	1,193	235	713
1969	1,295	253	786
1970	1,394	264	829
1971	1,493	283	889
1972	1,648	312	971
1973	1,833	350	1,088
Projections (as of July 1)			
1980	2,751	502	1,162
1985	3,035	547	1,043
1990	3,224	573	1,060
1995	3,468	612	1,146
2000	3,873	673	1,307
2025	4,926	844	1,638

a/ Includes only persons who receive benefits from the DI Trust Fund.
b/ Payable to dependents of disabled workers.

TABLE 14

ESTIMATED FEMALE BENEFICIARIES QUALIFIED FOR BOTH OLD-AGE BENEFITS[a] AND WIFE'S OR WIDOW'S BENEFITS[b], IN CURRENT-PAYMENT STATUS[c]
(in thousands)

Calendar Year	Qualified for Old-Age and Wife's: Total Eligible	Qualified for Old-Age and Wife's: With Smaller Old-Age Benefit	Qualified for Old-Age and Widow's: Total Eligible	Qualified for Old-Age and Widow's: With Smaller Old-Age Benefit
1980	2,376	558	4,693	1,314
1985	2,837	638	5,528	1,714
1990	3,292	708	6,256	2,096
1995	3,609	740	6,791	2,411
2000	3,833	767	7,099	2,627
2025	7,408	1,482	10,083	3,781

a/ i.e., benefits for retired workers.
b/ Does not include cases in which the woman has not become a beneficiary (has not retired). There are relatively few wives in this category, since generally they retire at the same time as their husbands, but the number of widows in this category are substantially higher. The number eligible for both old-age and parent's benefits is negligible.
c/ As of July 1.

TABLE 15

OASI BENEFIT PAYMENTS AS PERCENT OF TAXABLE PAYROLL[a/]

Calendar Year	Monthly Benefits to the Aged				Monthly Benefits to Younger Persons		Lump-sum Death Payments	Total Benefits[e/]
	Old-Age[b/]	Wife's[c/]	Widow's[d/]	Parent's	Child's	Mother's		
				Actual Data				
1960	3.48	.52	.52	.01	.51	.14	.08	5.28
1961	3.81	.55	.60	.02	.58	.15	.08	5.79
1962	4.11	.57	.69	.02	.61	.16	.09	6.23
1963	4.25	.57	.73	.02	.62	.16	.09	6.44
1964	4.26	.55	.76	.01	.62	.15	.09	6.44
1965	4.47	.56	.83	.01	.69	.16	.09	6.81
1966	3.83	.47	.77	.01	.66	.14	.08	5.96
1967	3.82	.45	.79	.01	.64	.13	.08	6.01
1968	3.87	.45	.84	.01	.67	.13	.07	6.13
1969	3.86	.44	.85	.01	.65	.12	.07	6.08
1970	4.47	.49	.98	.01	.74	.14	.07	6.98
1971	5.12	.55	1.12	.01	.84	.15	.07	7.93
1972	5.08	.53	1.10	.01	.80	.14	.07	7.79
1973	5.52	.55	1.32	.01	.83	.15	.06	8.48
				Projections				
1980	5.49	.53	1.27	.01	.66	.16	.05	8.17
1985	5.94	.53	1.26	.01	.66	.20	.05	8.65
1990	6.47	.54	1.29	.00	.67	.22	.06	9.25
1995	6.65	.53	1.27	.00	.70	.23	.06	9.44
2000	6.58	.49	1.25	.01	.71	.23	.06	9.33
2025	10.93	.67	1.75	.00	.76	.23	.09	14.43

a/ Includes adjustment to reflect the lower contribution rate on self-employment and on multiple employer excess wages as compared with the combined employer-employee rate.
b/ i.e., for retired workers.
c/ Including husband's and young wife's benefits.
d/ Including widower's benefits.
e/ Includes special benefits for certain persons aged 72 and over (which are almost entirely financed by general revenues). These were first payable in 1966.

TABLE 16

DI BENEFIT PAYMENTS AS PERCENT OF TAXABLE PAYROLL[a/]

Calendar Year	Disabled Worker	Wife's	Child's	Total Benefits
		Actual Data		
1960	.24	.02	.02	.28
1961	.35	.03	.05	.43
1962	.41	.03	.07	.52
1963	.44	.03	.08	.55
1964	.45	.03	.08	.57
1965	.51	.04	.09	.64
1966	.45	.04	.09	.58
1967	.47	.03	.09	.60
1968	.49	.04	.10	.62
1969	.51	.03	.10	.64
1970	.59	.04	.11	.74
1971	.72	.05	.13	.89
1972	.76	.05	.13	.94
1973	.87	.05	.14	1.06
		Projections		
1980	.96	.06	.11	1.13
1985	1.02	.06	.10	1.18
1990	1.07	.06	.10	1.23
1995	1.12	.06	.10	1.28
2000	1.20	.07	.11	1.38
2025	1.56	.09	.15	1.80

a/ Includes adjustment to reflect the lower contribution rate on self-employment and on multiple employer excess wages as compared with the combined employer-employee rate.

TABLE 17

ANALYSIS OF THE AVERAGE LONG-RANGE COST ESTIMATE FOR OASDI BY TYPE OF BENEFIT PAYMENT AS PERCENT OF TAXABLE PAYROLL[a/]

Type of Payment	OASI	DI
Primary benefits	8.52%	1.59
Wife's benefits	.58	.09
Widows's benefits	1.54	b/
Parent's benefits	.01	b/
Child's benefits	.71	.15
Mother's benefits	.22	b/
Lump-sum death payments	.07	b/
Total benefits	11.65	1,83
Administrative expenses	.21	.09
Railroad retirement financial interchange	.07	.00
Existing trust fund[c/]	.04	.00
Net total average-cost	11.97	1.92

a/ Includes adjustment to reflect the lower contribution rate on self-employment and on multiple employer excess wages as compared with the combined employer-employee rate.
b/ This type of benefit is not payable under this program.
c/ Average-cost of raising the existing trust fund to the level of next year's expenditures.

TABLE 18

"CURRENT-COST"[a/] OF THE OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE SYSTEM AS PERCENT OF TAXABLE PAYROLL[b/] FOR SELECTED YEARS

Calendar Year	OASI	DI	OASDI
	Actual Data		
1965	7.23	.70	7.93
1966	6.24	.64	6.88
1967	6.27	.65	6.92
1968	6.35	.67	7.03
1969	6.38	.70	7.07
1970	7.34	.81	8.14
1971	8.31	.97	9.28
1972	8.14	1.01	9.15
1973	8.70	1.11	9.81
	Projections		
1985	9.00	1.44	10.44
1990	9.52	1.51	11.03
1995	9.64	1.61	11.25
2000	9.54	1.77	11.31
2005	9.72	1.97	11.69
2010	10.56	2.13	12.69
2015	11.82	2.22	14.14
2020	13.47	2.24	15.71
2025	14.78	2.19	16.97
2030	15.46	2.14	17.60
2035	15.49	2.19	17.68
2040	15.40	2.28	17.68
2045	15.53	2.33	17.86

a/ Represents the cost as percent of taxable payroll of all expenditures in the year, including for all future years the amounts needed to maintain the funds at about one year's expenditures.

b/ Payroll is adjusted to take into account the lower contribution rate on self-employment income and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

TABLE 19

PROJECTED "CURRENT-COST"[1] OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE SYSTEM AS PERCENT OF PAYROLL[2], UNDER VARIOUS DYNAMIC ASSUMPTIONS, FOR SELECTED YEARS, 1974-2045

(in percent)

Calendar Year	DYNAMIC ECONOMIC ASSUMPTION[3]						
	5.00-3.00	5.00-2.00	5.00-4.00	6.00-3.00	4.00-3.00	6.00-4.00	4.00-2.00
1974	10.67	10.67	10.80	10.64	10.67	10.76	10.67
1985	10.44	9.69	11.84	9.50	11.24	10.78	10.43
1990	11.03	9.76	13.14	9.65	12.36	11.50	10.93
1995	11.25	9.47	14.06	9.51	13.08	11.88	11.00
2000	11.31	9.07	14.81	9.29	13.60	12.15	10.91
2005	11.69	8.94	16.00	9.35	14.46	12.75	11.05
2010	12.69	9.28	18.11	9.88	16.17	14.03	11.79
2015	14.14	9.90	21.01	10.75	18.57	15.84	12.94
2020	15.71	10.58	24.23	11.70	21.24	17.83	14.18
2025	16.97	11.03	27.11	12.42	23.53	19.51	15.08
2030	17.60	11.06	29.05	12.70	24.95	20.50	15.39
2035	17.68	10.77	30.06	12.59	25.57	20.84	15.21
2040	17.68	10.49	30.94	12.43	26.05	21.05	14.99
2045	17.86	10.35	32.11	12.40	26.80	21.42	14.94
Average Cost[4]	13.89	10.06	20.59	10.86	18.15	15.58	12.71

1/ Represents the cost as percent of payroll of the year's total outgo, including amounts needed to maintain the funds at about one year's outgo.

2/ Payroll is adjusted to take into account the lower contribution rate on self-employment income and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

3/ The first of the two figures represents the assumed ultimate annual percent increase in earnings after 1980, while the second figure represents the assumed ultimate increase in CPI.

4/ Represents the arithmetic average of the "current-cost" for the 75-year period 1974-2048 and includes an adjustment for the existing trust fund.

TABLE 20

PROJECTED "CURRENT-COST"[1/] OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE SYSTEM AS PERCENT OF PAYROLL[2/], UNDER VARIOUS FERTILITY ASSUMPTIONS, FOR SELECTED YEARS, 1974-2045
(In Percent)

Calendar Year	Total Fertility Rate		
	1.9	2.1	2.3
1974	10.67	10.67	10.67
1985	10.44	10.44	10.46
1990	11.03	11.03	11.06
1995	11.28	11.25	11.24
2000	11.42	11.31	11.22
2005	11.91	11.69	11.48
2010	13.06	12.69	12.35
2015	14.70	14.14	13.64
2020	16.55	15.71	14.98
2025	18.15	16.97	15.94
2030	19.13	17.60	16.28
2035	19.49	17.68	16.14
2040	19.67	17.68	16.02
2045	19.91	17.86	16.15
Average-Cost[3/]	14.64	13.89	13.27

1/ Represents the cost as percent of payroll of the year's total outgo, including amounts needed to maintain the funds at about one year's outgo.

2/ Payroll is adjusted to take into account the lower contribution rate on self-employment income and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

3/ Represents the arithmetic average of the "current-cost" for the 75-year period 1974-2048 and includes an adjustment for the existing trust fund.

TABLE 21

ACTUARIAL BALANCE OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM AS PERCENT OF TAXABLE PAYROLL[a] UNDER VARIOUS ACTS FOR VARIOUS ESTIMATES, LONG-RANGE COST ESTIMATES BASIS

Legislation	Date of Estimate	Benefit Costs[b]	Contributions[c]	Actuarial Balance[d]
Old-Age, Survivors, and Disability Insurance[e]				
1935 Act	1935	5.36%	5.36%	0.00%
1939 Act	1939	5.22	5.30	+.08
1939 Act (as amended in the 1940's)[g]	1950	4.45	3.98	-.47
1950 Act	1950	6.20	6.10	-.10
1950 Act	1952	5.49	5.90	+.41
1952 Act	1952	6.00	5.90	-.10
1952 Act	1954	6.62	6.05	-.57
1954 Act	1954	7.50	7.12	-.38
1954 Act	1956	7.45	7.29	-.16
1956 Act	1956	7.85	7.72	-.13
1956 Act	1958	8.25	7.83	-.42
1958 Act	1958	8.76	8.52	-.24
1958 Act	1960	8.73	8.68	-.05
1960 Act	1960	8.98	8.68	-.30
1961 Act	1961	9.35	9.05	-.30
1961 Act	1963	9.33	9.02	-.31
1961 Act (perpetuity basis)	1964	9.36	9.12	-.24
1961 Act (75-year basis)	1964	9.09	9.10	+.01
1965 Act	1965	9.49	9.42	-.07
1965 Act	1966	8.76	9.50	+.74
1967 Act	1967	9.72	9.73	+.01
1967 Act	1968	9.32	9.85	+.53
1967 Act	1969	8.72	9.88	+1.16
1969 Act	1969	9.96	9.88	-.08
1969 Act	1970	9.60	9.94	+.34
1971 Act	1971	10.27	10.17	-.10
1971 Act (level-earnings)	1972	10.16	10.21	+.05
1971 Act (dynamic)[f]	1972	8.96	10.29	1.33
June, 1973, P.L. 92-336 (dynamic)	1972	9.77	9.84	+.07
Dec., 1973, P.L. 92-603 (dynamic)	1972	10.63	10.63	.00
1972 Act (dynamic)	1973	10.95	10.63	-.32
July, 1972, P.L. 93-66 (dynamic)	1973	11.39	10.88	-.51
Oct., 1972, P.L. 93-233 (dynamic)[h]	1974	13.89	10.91	-2.98

TABLE 21 cont'd

ACTUARIAL BALANCE OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM AS PERCENT OF TAXABLE PAYROLL[a] UNDER VARIOUS ACTS FOR VARIOUS ESTIMATES, LONG-RANGE COST ESTIMATES BASIS

Legislation	Date of Estimate	Benefit Costs[b]	Contributions[c]	Actuarial Balance[d]
Old-Age and Survivors Insurance[e]				
1956 Act	1956	7.43	7.23	-0.20
1956 Act	1958	7.90	7.33	-.57
1958 Act	1958	8.27	8.02	-.25
1958 Act	1960	8.38	8.18	-.20
1960 Act	1960	8.42	8.18	-.24
1961 Act	1961	8.79	8.55	-.24
1961 Act	1963	8.69	8.52	-.17
1961 Act (perpetuity basis)	1964	8.72	8.62	-.10
1961 Act (75-year basis)	1964	8.46	8.60	+.14
1965 Act	1965	8.82	8.72	-.10
1965 Act	1966	7.91	8.80	+.89
1967 Act	1967	8.77	8.78	+.01
1967 Act	1968	8.34	8.90	+.56
1967 Act	1969	7.76	8.93	+1.17
1969 Act	1969	8.86	8.78	-.08
1969 Act	1970	8.55	8.84	+.29
1971 Act	1971	9.13	9.07	-.06
1971 Act (level-earnings)	1972	8.98	9.11	+.13
1971 Act (dynamic)[f]	1972	7.81	9.19	+1.38
June, 1973, P.L. 92-336 (dynamic)	1972	8.51	8.60	+.09
Dec., 1973, P.L. 92-603 (dynamic)	1972	9.32	9.31	-.01
1972 Act (dynamic)	1973	9.41	9.32	-.09
July, 1972, P.L. 93-66 (dynamic)	1973	9.81	9.38	-.43
Oct., 1972, P.L. 93-233 (dynamic)[h]	1974	11.97	9.39	-2.58

TABLE 21 Cont'd

ACTUARIAL BALANCE OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM AS PERCENT OF TAXABLE PAYROLL[a] UNDER VARIOUS ACTS FOR VARIOUS ESTIMATES, LONG-RANGE COST ESTIMATES BASIS

Legislation	Date of Estimate	Benefit Costs[b]	Contributions[c]	Actuarial Balance[d]
Disability Insurance[e]				
1956 Act	1956	0.42%	0.49%	+0.07%
1956 Act	1958	.35	.50	+.15
1958 Act	1958	.49	.50	+.01
1958 Act	1960	.35	.50	+.15
1960 Act	1960	.56	.50	-.06
1961 Act	1961	.56	.50	-.06
1961 Act	1963	.64	.50	-.14
1961 Act (perpetuity basis)	1964	.64	.50	-.14
1961 Act (75-year basis)	1964	.63	.50	-.13
1965 Act	1965	.67	.70	+.03
1965 Act	1966	.85	.70	-.15
1967 Act	1967	.95	.95	.00
1967 Act	1968	.98	.95	-.03
1967 Act	1969	.96	.95	-.01
1969 Act	1969	1.10	1.10	.00
1969 Act	1970	1.05	1.10	+.05
1971 Act	1971	1.14	1.10	-.04
1971 Act (level-earnings)	1972	1.18	1.10	-.08
1971 Act (dynamic)[f]	1972	1.15	1.10	-.05
June, 1973, P.L. 92-336 (dynamic)	1972	1.26	1.24	-.02
Dec., 1973, P.L. 92-603 (dynamic)	1972	1.31	1.32	+.01
1972 Act (dynamic)	1973	1.54	1.31	-.23
July, 1972, P.L. 93-66 (dynamic)	1973	1.58	1.50	-.08
Oct., 1972, P.L. 93-233 (dynamic)[h]	1974	1.92	1.52	-0.40

a/ Includes adjustment to reflect the lower contribution rate on self-employment income and on multiple-employer "excess wages" as compared with the combined employer-employee rate. Estimates prepared before 1964 are on a perpetuity basis, while those prepared after 1964 are on a 75-year basis. The estimates prepared in 1964 are on both bases. Estimates prepared before 1972 are based on level-earnings assumptions.

b/ Including adjustment (a) to reflect the effect of the existing trust fund, (b) for administrative expense costs, and (c) for the net cost of the financial interchange with the railroad retirement system. For level-earnings basis it represents the level-cost while for dynamic estimates it represents the average-cost.

c/ For level-earnings basis it represents the level-equivalent tax rate while for the dynamic estimates it represents the average rate.

d/ A negative figure indicates the extent of lack of actuarial balance. A positive figure indicates more than sufficient financing according to the particular estimate.

e/ The disability insurance program was inaugurated in the 1956 Act so that all figures for previous legislation are for the old-age and survivors insurance program only.

f/ Based on dynamic provisions similar to those in Public Law 92-336 wherein the first automatic adjustment becomes effective in 1975. The earnings, CPI and margin increases are assumed as for Public Law 92-335 that is, 5%, 2 3/4% and 3/8%, respectively.

g/ The major changes being in the revision of the contribution schedule; as of the beginning of 1950, the ultimate combined employer-employee rate scheduled was only 4 percent.

h/ Based on dynamic assumptions of 5% and 3% for earnings and CPI, respectively.